CLAIMS:

1. A rotor core, comprising:

a ring body; and

a plurality of teeth extending radially outward from an outer circumference of the ring body, wherein each tooth includes:

a coil winding portion about which a coil is wound, wherein the coil winding portion includes a proximal section and a distal section, the proximal section being coupled to the ring body, and the distal section being located radially outward of the proximal section; and

a magnetism converging portion provided at the distal section of the coil winding portion,

wherein the measurement of each coil winding portion with respect to the axial direction of the rotor core gradually increases from the distal section to the proximal section, and the measurement of each coil winding portion with respect to the circumferential direction of the rotor core gradually decreases from the distal section to the proximal section, and

wherein the rotor core includes a plurality of assembled core members, wherein each core member has part of the teeth the number of which obtained by dividing the total number of the teeth of the rotor core by the number of the core members, and wherein the teeth of each core member are spaced at equal angular intervals.

2. The rotor core according to claim 1, wherein the core members are a first core member and a second core member.

3. The rotor core according to claim 1, wherein a cross-sectional area of the coil winding portion of each tooth perpendicular to the extending direction of the coil winding portion is substantially the same at the distal section and the proximal section.

4. The rotor according to claim 3, wherein the cross-section is rectangular, and wherein four sides of the coil winding portion of each tooth that extend in the extending direction of the coil winding portion are linear.

5. The rotor core according to claim 3, wherein the area is substantially constant from the distal section to the proximal section.

6. The rotor core according to claim 1, wherein the measurement of each coil with respect to the axial direction of the rotor core is substantially constant from the distal section to the proximal section.

7. The rotor core according to claim 1, wherein a radially inward portion of the ring body is dented in the axial direction relative to a radially outward portion.

8. The rotor core according to claim 1, wherein, in each core member prior to assembly, the magnetism converging section does not exist in a range between the proximal section and the distal section of each coil winding portion with respect to a direction perpendicular to the extending direction of the coil winding portion.

9. The rotor core according to claim 1, wherein each core member is formed by compressing magnetic powder.

10. The rotor according to claim 1, wherein each tooth has a projection to which the wire of the corresponding coil is fixed, and wherein, when the core members are assembled, all the projections are located at the same side with respect to the axial direction of the rotor core.

11. A direct-current motor, comprising:

the rotor core according to claim 10; and

a commutator to which the ends of the wires forming the coils are connected.

12. A direct-current motor, comprising:

the rotor core according to claim 1;

a commutator; and

six magnets provided to surround the rotor core,

wherein the total number of the teeth of the rotor core is eight; and

wherein the commutator has twenty-four segments to which the ends of the wires forming the coils are connected.

13. A direct-current motor, comprising:

the rotor core according to claim 1;

a cylindrical yoke for accommodating the rotor core; and

a plurality of magnets provided on an inner wall of the yoke to surround the rotor core,

wherein, with respect to the axial direction of the rotor core, the measurement of each magnetism converging portion is substantially equal to the measurement of each magnet.

14. A method for winding coils on the rotor core according to claim 1, comprising steps of:

holding with a jig one of the core members prior to assembly at at least one of the teeth of the core member; and

rotating the core member held by the jig about a rotation axis along the extending direction of at least one of the teeth, thereby winding the wire forming the coil about the one tooth.

15. The method for winding coils on the rotor core according to claim 14, wherein each core member includes two teeth located on the rotation axis, and wherein the core

member is rotated while each of the two teeth is held by the corresponding jig.

16. The method for winding coils on the rotor core according to claim 14, wherein, during rotation of the core member, a guiding member, which guides the wire supplied from a wire feeder to the coil winding portion, is reciprocated along the extending direction of the tooth about which the wire is wound.

17. The method for winding coils on the rotor core according to claim 14, wherein each core member includes two teeth located on the rotation axis, and wherein the corresponding wires are simultaneously wound about the two teeth, respectively.

18. A method for winding coils on the rotor core according to claim 14, further comprising steps of:

fixing the wire to the projection provided on the tooth prior to winding of the wire about the tooth; and

fixing a portion of the wire extending from the tooth to the projection after winding the wire, and cutting the extending portion of the wire.

19. A method for winding coils on a rotor core, wherein the rotor core includes a ring body and a plurality of teeth extending radially outward from an outer circumference of the ring body, wherein each tooth includes a coil winding portion about which a coils is wound, wherein the coil winding portion includes a proximal section and a distal section, the proximal section being coupled to the ring body, and the distal section being located radially outward of the proximal section, wherein a magnetism converging section is provided at the distal section of the coil winding portion, wherein the rotor core includes a plurality of core members assembled to form

the rotor core, wherein each core member has part of the teeth the number of which obtained by dividing the total number of the teeth of the rotor core by the number of the core members, and wherein the teeth of each core member are spaced at equal angular intervals, the winding method comprising steps of:

holding with a jig one of the core members prior to assembly at at least one of the teeth of the core member; and

rotating the core member held by the jig about a rotation axis along the extending direction of at least one of the teeth, thereby winding the wire forming the coil about the one tooth.

20. A rotor core, comprising:

a ring body; and

a plurality of teeth extending radially outward from an outer circumference of the ring body, wherein each tooth includes:

a coil winding portion about which a coil is wound, wherein the coil winding portion includes a proximal section and a distal section, the proximal section being coupled to the ring body, and the distal section being located radially outward of the proximal section; and

a magnetism converging portion provided at the distal section of the coil winding portion,

wherein the rotor core includes a plurality of assembled core members, wherein each core member has part of the teeth the number of which obtained by dividing the total number of the teeth of the rotor core by the number of the core members, and wherein the teeth of each core member are spaced at equal angular intervals, and

wherein, in each core member prior to assembly, the magnetism converging section does not exist in a range between the proximal section and the distal section of each coil winding portion with respect to a direction perpendicular to

the extending direction of the coil winding portion.